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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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CHARLES P SAMMUT
LIMBACH & LINBACH
2001 FERRY BUILDING
SAN FRANCISCO CA 94111-4262

EXAMINER	
ONUAKU, C	
ART UNIT	PAPER NUMBER

2712

11

DATE MAILED: 06/28/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/826,744

Applicant(s)

Iwasaki

Examiner

Christopher Onuaku

Group Art Unit

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☒ Responsive to communication(s) filed on Jun 7, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-18 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-18 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Detailed Action

1. Upon reconsideration of the Office Action mailed 4/5/99, the Examiner agrees that Kassatly and Nakayama do not disclose “an audio and/or video data recording and reproducing wherein at least one of said plurality of recording means further performs said recording operation in synchronism with a synchronization signal of the received input data stream; and said reproducing means further performs said reproduction operation in synchronization with said synchronization signal”, as claimed in claim 5.

Since that Office Action was in error, it is now vacated and replaced with this Office Action.

This Office Action uses a new reference to meet the claims as they are currently written (as per amendment received 1/7/99). Since this reference could have been used against the claims as they were amended 1/7/99 (a new ground of rejection necessitated by amendment), this action is final.

2. The Information Disclosure Statement filed 3/9/98 by the applicant was considered by the examiner on 9/27/98. A copy of completed form PTO 1449 is enclosed

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Response to Arguments

3. Applicant's arguments with respect to claims 5&15 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's arguments filed 6/7/99 have been fully considered but they are not persuasive.

Applicant argues with respect to claim 1, 7 & 11 that Kassatly fails to disclose reproducing each recorded channel and multiplexing the reproduced channels. Examiner disagrees. Kassatly clearly discloses multiplexed channels are received by the receiving section of Fig.1, demultiplexed and stored in storage means 35,37 and 39. These stored channels are then "selected" ("multiplexed", broadly interpreted) by the selecting channel (multiplexer, broadly interpreted) 50. See col.19, lines 55-63). Additionally, applicant argues, with reference to claim 11, that Kassatly fails to disclose disk drives. Clearly Kassatly discloses disk drives. Please, see col.6, lines 53-58 and col.13, line 64 to col.14, line 3.

Applicant argues, with respect to claim 2, that the examiner has not made a prima facie case of obviousness because the examiner has failed to point out any teaching in Kassatly, Windrem, or the knowledge generally available knowledge to one of ordinary skill in the art at the time of the invention that there are any "storage" or "memory storage" failures that need to be overcome.

In response, the examiner has pointed out what each of the prior art references teaches and has indicated how and why these references would have been combined to arrive at the

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claimed invention. Applicant cannot show non-obviousness by attacking the references individually where, as here, the rejection is based on a combination of references. In *re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). As recognized by applicant, Windrem teaches a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller 99 to handle possible failure of a drive in the array. Windrem was cited to establish that it would have been obvious to the artisan to add the teaching of disk drive redundancy (or mirror configuration, as claimed) to Kassatly, which Kassatly lacks, to handle possible failure of one drive in the array. Applicant's argument that there has to be a demonstrated need of any "storage" or "memory storage" failures to overcome in order to suggest adding a disk drive redundancy means is irrelevant because it is well known to one of ordinary skill in the art that disk drive failures do occur in a digital video recording system. A reference must not be considered not only for what it expressly teaches, but also for what it fairly suggests. In *re Burkel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). The artisan is presumed to know something about the art apart from what references literally disclose. In *re Jacoby*, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without specific hint or suggestion in a particular reference In *re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In *re Bode*, 550 F.2d 656, 193 USPQ 12 (CCPA 1977). The artisan would have recognized the obviousness of adding disk drive redundancy to Kassatly, and

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the motivation to combine the references is clearly disclosed in col.2, line 28-40 of Windrem.

Applicant's argument with respect to claims 8-9&12-13 are similar to applicant's argument with respect to claim 2, and examiner's response is accommodated in the examiner's response to applicant's argument to claim 2 above.

Applicant argues that examiner assertion that Nakayama that the control data is added to the data signals during the process of recording process is incorrect since claims 4&1 set forth that the control data is demultiplexed before the recording process, not added during the recording process. Nakayama clearly teaches that the ID data 137a to 137f (control data) are added during data processing for recording. (See col.7, lines 23-66). When Kassatly is modified with the teaching of Nakayama, it would have been obvious that the recorded data would be reproduced before being "multiplexed" by the channel selector 50 of Kassatly.

Applicant argues, with respect to claims 6 and 16, examiner's motivation to combine Kassatly and Nakayama. This argument is similar to the applicant's argument with respect to claims 8-9 and 12-13 which has been thoroughly addressed by the examiner. In response, examiner refers the applicant to the examiner's response to the applicant's similar argument with respect to claims 8-9 and 12-13 above. Furthermore, applicant argues that the examiner fails to address the "components" of an "audio and/or video data recording and reproducing apparatus" which the applicant now interprets to include receiving means, demultiplexing means, a plurality

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of recording means, a reproducing means and a multiplexing means. Examiner disagrees. Claims 6 recites: "An audio and/or video data recording and reproducing apparatus according to claim 5 **further comprising** a plurality of audio and/or video data recording and reproducing apparatuses being connected in parallel, wherein said input data stream and said output data stream are input and output among said plurality of audio and/or video data recording and reproducing apparatuses". The preamble of claim 6 is accommodated in the discussions of claim 1 on which claim 6 is remotely dependent. Windrem is applied to address the "further comprising" portion of claim 6. The same response is true for claim 16.

Claim Rejections - 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claims 1, 7,10, 11, 17&18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kassatly.(US 5,790,177).

Regarding claim 1, Kassatly discloses in Fig.1,2&3 a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode comprising:

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a) the claimed receiving means for receiving a data stream in which a plurality of audio data and video data or one of the same are multiplexed in a predetermined order(see the reception process 14 for receiving and processing signals received from the transmitter 12; col.18, line 66 to col.19, line 35);

b) the claimed multiplexing/demultiplexing means(see multiplexer 25 and demultiplexer 30; col.19, line 36 to col.20, line 34); and

c) the claimed plurality of recording/reproducing means(see channel 1 to channel n storage means 35 to 39, respectively; col.19, lines 49-55).

Regarding claims 7,10&11, the limitations of claims 7,10&11 are accommodated in the discussions of claim 1 above.

Regarding claim 17, the limitations of claim 17 are accommodated in the discussions of claim 7 above.

Regarding claim 18, the limitations of claim 18 are accommodated in the discussions of claim 1 above.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3, 8-9 & 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kassatly in view of Windrem et al (US 5,754,730).

Regarding claim 2, Kassatly fails to disclose wherein each of the plurality of recording means adopts a mirror configuration having a plurality of recording apparatuses for recording the same audio and/or video data. Windrem teaches a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller 99 to handle possible failure of one drive in the array (col.2, lines 28-40). Therefore, it would have been obvious to modify Kassatly by realizing Kassatly with the Windrem redundancy system wherein redundancy is provided through a redundant data controller 99 to handle possible failure of one drive in the array

Regarding claim 3, Windrem further discloses wherein each of said plurality of recording means adopts an array configuration in which a plurality of recording apparatuses are connected in parallel. Windrem teaches in Fig 1 a disk array 12 comprising an array of disk drives wherein the array of disk drives provides sufficient bandwidth to record or play digitized video signals,

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allowing random access to video data (see Fig.1; disk array 12; col.1, lines 15-32, and col. 3, lines 31-52). It would have been obvious to one of ordinary skill in the art to modify Kassatly by adding the disk array of Windrem to Kassatly since an array of disk drives provides sufficient bandwidth to record or play digitized video signals, allowing random access to video data.

Regarding claim 8, Windrem discloses wherein the demultiplexed each one is duplicated on more than one recording medium to perform backup of the demultiplexed each one (see redundant data controller 99, and col.2, lines 28-40).

Regarding claim 9, the claimed limitations of claim 9 are accommodated in the discussions of claim 3 above.

Regarding claim 12, the limitations of claim 12 are accommodated in the discussions of claim 2 above.

Regarding claim 13, the limitations of claim 13 are accommodated in the discussions of claim 3 above.

8. Claims 4, 5, 14 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kassatly in view Nakayama et al(US 4,947,271).

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Regarding claim 4, Windrem fail to explicitly disclose wherein control data is multiplexed on data stream, the demultiplexing means demultiplexes the control data multiplexed on the data stream, and provision is made for controlling a recording operation of the recording means and reproduction operation of the reproducing means based on the demultiplexed control data.

Nakayama teaches in Fig.7 a recording/reproducing means that in the recording process multiplexes recorded data signals to which ID data(control data) had been added. In the reproduction process, these multiplexed data signals are later reproduced, demultiplexed and the ID data extracted (see col.7, line 34 to col.10, line 19). It desirable to record data signals with their respectable control data (e.g. ID data), and then multiplex the data signals with the control data in order to facilitate the recovery of the data signals during the reproduction process when the data signals are demultiplexed. To make these processes efficient there is inherently a control means that controls , based on the control data, the recording/reproduction of the data signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Windrem by realizing Windrem with a means add control data to data signals, during the recording process, before multiplexing, as taught by Nakayama, in order to facilitate the recovery of the data signal, during the reproduction process when the data signals are reproduced and demultiplexed. Furthermore, it would have been obvious to realize Windrem with a control means in order to make these controlled recording/reproduction processes efficient.

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Regarding claim 5, Nakayama teaches wherein at least one of the plurality of recording means and the reproducing means further performs operation in synchronization with a synchronization signal of the data stream(see Fig.6, and col.3, lines 8-37).

Regarding claim 14, the limitations of claim 14 are accommodated in the discussions of claim 4 above.

9. Claims 5&15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kassatly in view Nakayama et al(US 4,947,271), and further in view of Morimoto et al (US 5,841,941).

Regarding claims 5&15, Kassatly and Nakayama fail to disclose wherein at least one of the plurality of recording means and the reproducing means further performs operation in synchronization with a synchronization signal of the data stream. Morimoto teaches in Fig.9 an input encoded data stream which is first input to a recording block formatter 28. A unit information generator 27 retrieves unit information (sync. signal) from the input encoded data stream, so as to output the information to the recording block formatter 28 which formats the data stream so that the number M of successive transport packets are recorded as the number N of successive recording blocks. A reproducing head 9 outputs a reproduced signal from the recording medium 8. A reproducing processor 30 restores the data stream by performing a reproduction processing for the output reproduced signal (see col.13, lines 23-65). Here Morimoto teaches extracting the sync signal from an input encoded data stream and using the

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extracted sync signal to convert M successive transport packets to N successive recording packets and recording the converted signal on a recording medium. A reproducing system restores and reproduces the restored data stream based on the sync signal. The sync signal facilitates proper recording and reproducing of the data stream. It would have been obvious to one of ordinary skill in the art to further modify Kassatly by realizing Kassatly with a means to provide recording/reproducing sync signal in order to facilitate proper recording and reproducing of a data stream

10. Claims 6&16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kassatly in view of Nakayama et al and Morimoto, and further in view of Windrem.

Regarding claim 6, Kassatly, Nakayama and Morimoto fail to disclose a plurality of audio and/or video data recording and reproducing apparatuses being connected in parallel, and wherein the input data stream and the output data stream are input and output among the plurality of audio and/or video data recording and reproducing apparatus. Windrem teaches in Fig 1 a disk array 12 comprising an array of disk drives which provide sufficient bandwidth to record or play digitized video signals, allowing random access to video data (see Fig.1; disk array 12; col.1, lines 15-32, and col. 3, lines 31-52). It would have been obvious to one of ordinary skill in the art to modify Kassatly by adding the disk array of Windrem to Kassatly since an array of disk drives provides sufficient bandwidth to record or play digitized video signals, allowing random access to video data.

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Regarding claim 16, the limitations of claim 16 are accommodated in the discussions of claim 6 above.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

12. Any inquiry concerning this communication or earlier communications from this examiner should be directed to Christopher Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on Tuesday to Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Monday.

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If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-5399 (for informal or draft communications, please label


"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be direct to the Group receptionist whose telephone is (703) 305-4700.


COO

6/18/99


Wendy Garber
Supervisory Patent Examiner
Technology Center 2700